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Cc: Robinson, Derek J CIV NAVFAC HQ, BRAC PMO[derek.j.robinson1@navy.mil]; Janda,
Danielle L CIV NAVFAC SW[danielle.janda@navy.mil]
From: LEE, LILY
Sent: Tue 4/19/2016 6:57:35 PM
Subject: FW: Rad questions & available for call? - 1 of 2 emails
[Hunters Pt HRA Thorium -1.pdf](#)
[Hunters Pt HRA Thorium -2.pdf](#)
[Hunters Pt HRA Thorium -3.pdf](#)

Sorry the first email bounced. I'm resending with partial attachments

Lily Lee

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From: LEE, LILY

Sent: Tuesday, April 19, 2016 7:25 AM

To: 'zachary.edwards@navy.mil' <zachary.edwards@navy.mil>; 'matthew.slack@navy.mil' <matthew.slack@navy.mil>

Cc: 'Robinson, Derek J CIV NAVFAC HQ, BRAC PMO' <derek.j.robinson1@navy.mil>; 'Janda, Danielle L CIV NAVFAC SW' <danielle.janda@navy.mil>

Subject: Rad questions & available for call?

Dear Zach and Matt,

I look forward to talking to you tomorrow. In the mean time, I wanted to see if you might be available for a quick checkin call today. I'm at 415-947-4187. You many know some of this information off the top of your head, and it would be great to get quick answers to those. I understand that some of these may take more time to address. Would you be available to do a call Monday April 25 from 8:30-11am or 1:30 – 4 pm or Friday April 29 from 8:30 to 4 pm?

In the mean time, I appreciate that Danielle has provided a spreadsheet with the radionuclide concentrations measured in the past.

General questions re past documentation: I am looking in old files to research some questions related to this Thursday's meeting, and in many cases I cannot find information in the EPA's Superfund Records Center and the previous RPM's at the time are now retired. I know the Navy has the full Administrative Record. I tried this link to the Admin Record on the BRAC website several times, but it does not return results to my searches. It seems to just freeze.

1. Do you have any documentation in your records regarding the EPA review of the 2001 or 2006 Basewide Rad Removal Action memo? (I asked this already 4/11, and I never heard back)
2. I found the reference area concentrations for sewer and stormwater removals for post-2012 in the June 2013 *SUPR Abstract for San Sewer & Storm Drain Removal Conducted After September 1, 2012*. So were the reference levels for previous work in individual SUPRA's as you went along? Karla and Mark remembered that perhaps the Navy had in the past set basewide background levels for at least some radionuclides, but I haven't yet hunted down that documentation. I've ordered some reports from the Superfund Records Center, but they're in off-site storage and will take some time to deliver, and I'm not sure they are the right places to look. Do you have this kind of information more handy to be able to email?

Thorium-232 specific questions. On 4/11, Derek said by phone that RASO said something about Thorium was unusual, but he didn't remember the details. Could you elaborate? On 4/6, I asked Danielle to ask RASO if they remembered significant Thorium-232 found in the past, and I never heard back. Attached are the Th-232 related excerpts from the HRA and the Th-232 related subset of the NED/NIRIS spreadsheet of radionuclide concentrations that Danielle sent me 4/7.

For the majority of samples, the column "removed" was left blank, and on 4/15, she said that to find out whether they were actually removed or not would require going back to original reports. So I'm not sure how to tell how many of these points are still left in place. Is it possible to get a spreadsheet that shows only samples for soil that was left behind?

More detailed questions:

1. How was it determined if thorium 232 (Th-232) was a radionuclide of concern (ROC) for a survey unit (SU)?
2. If Th-232 was not an ROC for a SU, was the SU remediated to the Th-232 cleanup goal of 1.69 pCi/g? Is there Th-232 data for those SUs for which it was not an ROC?
3. Was Th-232 data used to calculate the risk for SUs for which it was not an ROC?
4. Was background for Th-232 calculated? Was it done more than once? Where was the background area(s)? Where is this data and can it be provided?
5. For NIIRIS Th-232 data, can we get the data and the associated uncertainty for each data point? (was not in provided table). Is the uncertainty counting uncertainty or total propagated uncertainty?
6. Was the Th-232 data from the spreadsheet that was provided reviewed or validated? What was the outcome?
7. Related to the Th-232 table and data for which no parcel is assigned: Where is 6PBFS? Where is 72-PDT or 72-PBT? Where is Site 00007?
8. When was Thorium-232 first added to the cleanup goals? How was Thorium-232 identified and addressed prior to that date?
9. Why weren't elevated levels of Thorium-232 always excavated if a sample exceeded the cleanup goal of 1.69 pCi/g in a trench?